

BULLETIN OF THE UNIVERSITY OF UTAH

Vol. 36

October 20, 1945

No. 2

Some Erigonid Spiders of the Genera Eulaira and Diplocentria

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BIOLOGICAL SERIES, Vol. IX, No. 4



PUBLISHED BY
THE UNIVERSITY OF UTAH
SALT LAKE CITY

SOME ERIGONID SPIDERS OF THE GENERA EULAIRA AND DIPLOCENTRIA

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This paper deals with some species of *Eulaira* and *Diplocentria* found in the Nearectic area, with the intent of placing them in their proper genera and describing those species which are new. The types of the new species are in the University of Utah collection. *Eulaira* and *Diplocentria* appear to be closely related, but show some differences, which are given under the respective genera.

Genus EULAIRA Chamberlin and Ivie, 1933

Tmeticus Menge (in part), Emerton, 1882, *Trans. Conn. Acad. Sci.*, 6:56-57 (*concarus*, *microtarsus*).

Oedothorax Bertkau (in part), Crosby, 1905, *Proc. Phila. Acad. Sci.*, 310 (*concarus*, *microtarsus*).

Grammonota Emerton (in part), Chamberlin, 1919, *Ann. Ent. Soc. Amer.*, 12:250 (*simplex*).

Eulaira Chamberlin and Ivie, 1933, *Bull. Univ. Utah*, [Biol.] 2(2):14 (*delata*, *schediana*).

Eulaira (in part), Chamberlin and Ivie, 1935, *Ibid.*, [Biol.] 2(8):15-16 (*mana*).

Eulaira, Gertsch and Mulaik, 1936, *Amer. Mus. Novitates*, 863:1 (*suspecta*).

Sciastes (in part) Bishop and Crosby, 1938, *J. New York Ent. Soc.*, 46:75-84 (*concarus*, *microtarsus*, *simplex*).

Eulaira, Chamberlin and Ivie, 1939, *Verh. VII. Int. Kongr. Ent.*, Berlin, 1:60-61 (*delana*, *chelata*).

GENOTYPE: *Eulaira delata* Chamberlin and Ivie.

Head of male not modified. Tibia of palpus with distal border above not modified at all. Embolic division of the palpus simple, with a short tail-piece. The following more detailed characteristics may be taken as typical for the genus:

COLOR: Carapace orange or light brownish. Chelicerae orange or light reddish brown. Endites orange. Sternum and labium with yellowish background, more or less shaded with dusky. Legs and palpi yellowish orange. Abdomen light gray, sometimes darker. Spinnerets yellowish.

STRUCTURE: Male and female very similar in general appearance. Carapace longer than wide, in ratio of about 4:3, of usual form; base truncate or slightly emarginate; sides rounded, cervical indentation slight; width of head more than half the width of the thoracic part; corners of head rounded. Height of clypeus about 2.5 diameters of an a. s. eye. Anterior median eyes much smaller than the others, which are about equal. Anterior eye row straight or slightly recurved; a. m. eyes about a radius apart, a little farther from the side eyes. Posterior row about straight; eyes equidistant, a diameter or a little less apart. Median ocular quadrangle about as wide as long, much wider behind than in front. Chelicerae vertical; parallel in the female, slightly divergent in the male; fang groove with three large teeth, widely separated, on the front margin, 4 to 6 small teeth on the hind margin. Sternum shield-shaped, a little longer than wide; posterior tip extending between the hind coxae, separating them by about one of their diameters. Legs 4 1 2 3 in

order of length; not modified; each patella with a bristle at the distal point; tibiae 1, 2, and 3 with two weak spines above, tibia 4 with one spine. Male palpus with the femur and patella unmodified; tibia simple, the dorsal margin not modified nor extended. Details of the palpal organs vary with the species, as shown by the figures. Abdomen simple. Epigynum simple, usually with a small plate which extends a little beyond the genital furrow. Length of spiders about 1.5 to 2.0 mm. Hair covering normal.

***Eulaira altura* Chamberlin and Ivie, new species**

Fig. 15.

FEMALE.

Color, size, and structure typical, as in *dela*. The epigynum, however, is distinctive.

Measurements:	♀ Holotype
Length	1.80 mm.
Carapace:	
Length	.90
Width	.72
Tibia-patella:	
1	.78
4	.88

TYPE LOCALITY: California: Guernsey Creek (about W 120° 55': N 40° 20'); ♀ holotype; September 7, 1935; R. V. Chamberlin and W. Ivie collectors.

***Eulaira chelata* Chamberlin and Ivie**

Figs. 19, 20.

Eulaira chelata Chamberlin and Ivie, 1939, *Verh. VII Int. Kongr. Ent. Berlin*, 1:61; *11, 12.

Color typical, tending to be light as in *dela* and *simplex*. Size a little smaller than in *dela* and *simplex*. Structure essentially typical. Embolic division of the male palpus aberrant.

Measurements:	♂	♀
Length	1.50 mm.	1.65 mm.
Carapace:		
Length	.70	.72
Width	.55	.64
Tibia-patella:		
1	.60	.64
4	.64	.72

TYPE LOCALITY: Utah: Mirror Lake, Uintah Mts. (W 110° 49': N 40° 42'); July 28, 1936; ♂ holotype, ♀ allotype, ♂ s ♀ s paratypes; Wilton Ivie collector.

Eulaira concava (Emerton)

Tmetiscus concavus Emerton, 1882, *Trans. Conn. Acad. Sci.*, 6:57; *17:3.

Oedothorax concavus, Crosby, 1905, *Proc. Phila. Acad. Sci.*, 311.

Sciastes concavus, Bishop and Crosby, 1938, *J. New York Ent. Soc.*, 46:76; *46, 47.

MALE.

Color, size, and structure essentially typical, light. Length 1.8 mm.

TYPE LOCALITY: Massachusetts: Hyde Park; May 14, 1875 (W 71° 7' N 42° 15'); ♂ holotype; J. H. Emerton.

KNOWN LOCALITIES:

Massachusetts: Monponset (70.42); June 12, 1915; J. H. Emerton. (Bishop and Crosby, 1938). ♂

Mass.: Ipswich (70.42); May 18, 1919. (Bishop and Crosby, 1938). 2 ♂

Mass.: Hyde Park (71.42). (Type locality). ♂

Mass.: Readville (71.42); 1908; J. H. Emerton. (Bishop and Crosby, 1938). 23 ♂

Vermont: Mt. Mansfield (72.44); July 5, 1935. (Bishop and Crosby, 1938). 2 ♂

Connecticut: New Haven (72.41); (Emerton, 1882). ♂ s

New York: Raquette Lake (74.43); June 11, 1927. (Bishop and Crosby, 1938). 4 ♂

New York: Cinnamon Lake, Schuyler Co. (76.42); June 10, 1934 (Bishop and Crosby, 1938). ♂

New York: Mendon Ponds, Monroe Co. (77.43); May 18, 1930. (Bishop and Crosby, 1938).

Quebec: Ile d'Alma, Lac St. Jean; July 28, 1934. (Bishop and Crosby, 1938). ♂ 2 ♀

We have not seen this species, but Emerton's and Bishop and Crosby's descriptions and figures leave no doubt that it belongs in this genus.

Eulaira dela Chamberlin and Ivie

Figs. 1-4.

Eulaira dela Chamberlin and Ivie, 1933, *Bull. Univ. Utah*, [Biol.] 2(2):15; *33-36.

COLOR: Carapace brownish yellow. Chelicerae light reddish brown. Endites orange. Sternum and labium yellowish, more or less shaded with dusky. Legs and palpi yellowish orange. Abdomen light yellowish gray. Spinnerets light yellow.

STRUCTURE typical.

Measurements:	♂	♀
Length	1.85 mm.	2.00 mm.
Carapace:		
Length	.95	1.00
Width	.70	.77
Tibia-patella:		
1	.80	.88
4	.95	1.03

TYPE LOCALITY: Utah: South Fork of Raft River, 8 mi. So. Lynn (about W $113^{\circ} 55'$: N $41^{\circ} 50'$), September 7, 1932; ♂ holotype, ♀ allotype, ♂ s ♀ s paratypes; R. V. Chamberlin and W. Ivie collectors.

Eulaira delana Chamberlin and Ivie

Fig. 16.

Eulaira delana Chamberlin and Ivie, 1939, *Verh. VII Int. Kongr. Ent. Berlin*, 1:60; *10.

FEMALE.

Closely related to *dela*, but darker in color, and with a slightly different epigynum.

COLOR: Carapace brownish orange, with a dusky shield-shaped mark on the back of the head part, which encloses a pair of longitudinal light spots; also other dusky markings. Chelicerae reddish orange. Endites orange with whitish tips. Labium and sternum dusky. Legs dull orange. Abdomen dark gray.

STRUCTURE typical.

Measurements:	♀
Length	1.60 mm.
Carapace:	
• Length	.73
Width	.54
Tibia-patella:	
1	.60
4	.70

TYPE LOCALITY: Oregon: Pinehurst (W $122^{\circ} 24'$: N $42^{\circ} 6'$); September 9, 1935; ♀ holotype, 2 ♀ paratypes; R. V. Chamberlin and W. Ivie collectors.

Eulaira microtarsus (Emerton)

Figs. 17, 18.

Tmetiscus microtarsus Emerton, 1882, *Trans. Conn. Acad. Sci.*, 6:57; *17:4.

Oedothorax microtarsus, Crosby, 1905, *Proc. Phila. Acad. Sci.*, 311.

Sciastes microtarsus, Bishop and Brosby, 1938, *J. New York Ent. Soc.*, 46:77; *48-49a.

COLOR typical; abdomen varies from light gray to nearly black.

Structure essentially typical. Anterior eye row slightly recurved. Leg 1 of male nearly as long as leg 4. Male palpus very small, scarcely larger than the female palpus. Epigynum distinctive. Size about average.

TYPE LOCALITY: New Hampshire: Mt. Washington (W $71^{\circ} 17'$: N $44^{\circ} 16'$), in moss under the highest trees; ♂ holotype; J. H. Emerton.

KNOWN LOCALITIES:

New Hampshire: Mt. Washington (71.44); ♂ (type locality).

New York: Mt. Whiteface (74.44); Aug. 22, 1916. (Bishop and Crosby, 1938). 3 ♂ 5 ♀.

Same; Oct. 21, 1934. (Bishop and Crosby, 1938). 2 ♂ ♀.

Colorado: Pingree Park (105.40); Aug. 20, 1924. (Bishop and Crosby, 1938). 2 ♂.

Colorado: Berthoud Pass (105.39); Aug. 24, 1935; W. Ivie.

4 ♂ 2 ♀.

Utah: Mirror Lake (110.40); Aug. 18, 1942; W. Ivie. ♂ 2 ♀.

Utah: upper Provo River (111.40); Aug. 20, 1942; W. Ivie.

4 ♂ 4 ♀.

This species was found on the ground in damp situations.

***Eulaira obscura* Chamberlin and Ivie, new species**

FEMALE.

Fig. 14.

COLOR: Carapace light brown, with a dusky shield-shaped mark on the back of the head, and faint radial marks. Chelicerae and endites light reddish brown. Labium and sternum yellowish brown, shaded with dusky. Legs, palpi, and spinnerets light yellowish brown. Abdomen blackish.

STRUCTURE: Essentially typical. Anterior eye row slightly recurved; a. m. eyes nearly a diameter apart, about the same distance from the side eyes. Posterior row straight; p. m. eyes a diameter apart, slightly closer to the side eyes.

Measurements:	♀
Length	2.00
Carapace:	
Length	.82
Width	.65
Tibia-patella:	
1	.72
4	.82

TYPE LOCALITY: Montana: Superior (W 114° 52': N 47° 10'); July 13, 1938; ~~holotype~~, ♀ paratype; Wilton Ivie collector.

OTHER LOCALITY: Idaho: N. E. Fruitland (116.44); May 20, 1944; W. Ivie. ♂ ♀

***Eulaira schediana* Chamberlin and Ivie**

Figs. 10-12.

Eulaira schediana Chamberlin and Ivie, 1933, *Bull. Univ. Utah*, [Biol.] 2(2):17; *37-40.

Color, size, and structure typical; very similar in appearance to *dela* and *simplex*, but with differences in the palpus and epigynum.

Measurements:	♂	♀
Length	1.70	2.10
Carapace:		
Length	.88	.92
Width	.67	.72
Tibia-patella:		
1	.75	.85
4	.85	.93

TYPE LOCALITY: Utah: Dove Creek, Raft River Mts. (about W 113° 36': N 41° 48'); September 9, 1932; ♂ holotype, ♀ allotype, ♂ s ♀ s paratypes; R. V. Chamberlin and W. Ivie collectors.

KNOWN LOCALITIES:

- Colorado: Vasquez (105.39); Aug. 24, 1935; W. Ivie. ♂.
 Colorado: Hot Sulphur Springs (106.40); Aug. 24, 1935; W. Ivie.
 ♂ 4 ♀.
 Colorado: between Buena Vista and Salida (106.38); Sept. 4,
 1937; R. V. Chamberlin. 4 ♂ 4 ♀.
 Wyoming: Bridge Bay, Yellowstone Park; (110.4); Aug. 11,
 1940; W. Ivie. ♂ 2 ♀.
 Utah: Mirror Lake (110.40); Aug. 18, 1942; W. Ivie. 4 ♂ 4 ♀.
 Utah: Horse Valley, Henry Mts. (110.38); Sept. 7, 1929; R. V.
 Chamberlin and W. J. Gertsch. 4 ♂ 4 ♀.
 Utah: upper Provo River (111.40); Aug. 20, 1942; W. Ivie.
 3 ♂ 5 ♀.
 Utah: City Creek Canyon (111.40); Sept. 20, 1932; W. Ivie.
 4 ♂ 4 ♀.
 Utah: Ferron (111.39); April 13, 1933; W. Ivie and H. Ras-
 mussen. ♂ 2 ♀.
 Utah: Fish Lake (111.38); Sept. 5, 1929; R. V. Chamberlin and
 W. J. Gertsch. 4 ♂ 4 ♀.
 Utah: Cedar Canyon (112.37); May 1, 1927. ♂.
 Utah: Kaibab Forest (112.36); Sept. 4, 1931; R. V. Chamberlin.
 ♂ 4 ♂.
 Utah: Raft River Mts., Dove Creek (113.41). (Type locality).
 4 ♂ 4 ♂.

***Eulaira schediana nigrescens* Chamberlin and Ivie, new subspecies**

Fig. 13.

This subspecies is similar to *schediana* sens. str., but is much darker in color. Caparace brown, with margins and radial marks dusky. Chelicerae and endites reddish brown. Sternum and labium dusky over light brown. Legs and palpi yellowish brown. Abdomen black. Spinnerets yellowish brown.

TYPE LOCALITY: Wyoming: Thumb, Yellowstone Park (W 110° 32': N 44° 24'); June 23, 1938; ♂ holotype, ♀ allotype, ♂ s ♀ s paratypes; W. Ivie collector.

***Eulaira simplex* (Chamberlin)**

Figs. 5-7.

Grammonota simplex Chamberlin, 1919, *Ann. Ent. Soc. Amer.*, 12:250; *18:1-2.

Sciastes simplex, Bishop and Crosby, 1938, *J. New York Ent. Soc.*, 46:78; *50-53.

COLOR typical, usually light.

STRUCTURE and size very similar to *dela* and *thumbia*, differing only in minor details of the palpus and epigynum.

Measurements:	♂	♀
Length:	1.80	1.95
Caapace:		
Length	.88	.88
Width	.65	.66
Tibia-patella:		
1	.80	.80
4	.85	.85

TYPE LOCALITY: Utah: Chalk Creek, Uintah Mts. (about W $111^{\circ} 8'$: N $40^{\circ} 50'$), 7300 ft.; about Sept. 1, 1917; ♂ holotype, ♀ allotype; R. V. Chamberlin collector.

KNOWN LOCALITIES:

- Colorado: Pingree Park (105.40); Aug. 20, 1923; C. R. Crosby. (Bishop and Crosby, 1938). ♀.
- Idaho: Emigration Canyon (111.42); August 29, 1928; W. J. Gertsch. (Bishop and Crosby, 1938). 2 ♂.
- Utah: Logan Canyon (111.41). ♀.
- Utah: Swan Creek Canyon, Bear Lake (11.41); Sept. 7, 1921; J. C. Chamberlin. ♂ ♀.
- Utah: Mirror Lake (110.40); July 28, 1936; W. Ivie. 4 ♂ 4 ♀.
- Utah: Chalk Creek (111.40). (Type locality). ♂ ♀.
- Utah: upper Provo River (111.40; Aug. 20, 1942; W. Ivie. 4 ♂ 4 ♀.
- Utah: various localities in Wasatch Mts. ♂ s ♀ s.
- Utah: Teacup Lake, Uintah Mts.; Sept. 5, 1931. (Bishop and Crosby, 1938). 2 ♂.
- British Columbia: Terrace; June 1-10, 1931; Hippisley. (Bishop and Crosby, 1938). ♂.

Eulaira thumbia Chamberlin and Ivie, new species

Figs. 8, 9.

Sciastes simplex (Chamberlin) (in part), Bishop and Crosby, 1938, *J. New York Ent. Soc.*, 46:78. (The locality record from Yellowstone Park is probably *thumbia* rather than *simplex*.)

COLOR essentially typical, but a little darker than in *simplex* and *dela*. Abdomen dark gray.

STRUCTURE typical, being close to *simplex*, but with minor differences in the palpus and epigynum.

Measurements:	♂	♀
Length	1.80	2.20
Carapace:		
Length	.85	.92
Width	.67	.66
Tibia-patella:		
1	.70	.80
4	.76	.88

TYPE LOCALITY: Wyoming: Thumb, Yellowstone Park (W $110^{\circ} 32'$: N $44^{\circ} 24'$); June 23, 1938; ♂ holotype, ♀ allotype, ♂ ♀ s paratypes; W. Ivie collector.

OTHER LOCALITIES:

- Wyoming: Grand Canyon, Yellowstone Park (110.44); Aug. 30, 1927. (Bishop and Crosby, 1938). 3 ♂ 7 ♀.
- Wyoming: Bridge Bay, Yellowstone Park (110.44); Aug. 11, 1940; W. Ivie. ♂ 4 ♀.

The two following species which have been placed in *Eulaira* are smaller in size and have other features, which make their inclusion in *Eulaira* dubious. We list them here in *Eulaira*, tentatively, pending further investigation.

Eulaira mana Chamberlin and Ivie

Eulaira mana Chamberlin and Ivie, 1935, *Bull. Univ. Utah*, [Biol.] 2(8):16; *84.

TYPE LOCALITY: Utah: Mill Creek Canyon, Wasatch Mts. (W 111° 45': N 40° 40'); April, 1935; ♀ holotype; W. Ivie collector.

Eulaira suspecta Gertsch and Mulaik

Eulaira suspecta Gertsch and Mulaik, 1936, *Amer. Mus. Novitates*, 863:1; *1, 2, 3.

TYPE LOCALITY: Texas: 7 miles E. Edinburg (W 98°: N 26°); February 18, 1935; ♂ holotype, ♀ allotype, 2 ♀ paratypes; S. Mulaik collector.

Genus DIPLOCENTRIA Hull, 1911

Tmeticus Menge (in part), 1868, *Schr. Danzig Naturf. Ges.* (N. F.) 2:184.

Tmeticus (in part), Emerton, 1882, *Trans. Conn. Acad. Sci.*, 6:56 (*bidentatus*).

Oedothorax Bertkau (in part), Crosby, 1905, *Proc. Phila. Acad. Sci.*, 310 (*bidentatus*).

Diplocentria Hull, 1911, *Trans. N. H. Soc. Newcastle*, 3:581 (*rivalis*, Type).

Microneta Menge (in part), Emerton, 1917, *Canadian Ent.* 49:265 (*clavata*, ♀).

Eulaira (in part), Chamberlin and Ivie, 1935, *Bull. Univ. Utah*, [Biol.] 2(8):15 (*tigana*).

Scotoussa Bishop and Crosby, 1938, *J. New York Ent. Soc.*, 46:87 (*bidentata*, Type).

Maso Simon (in part), Chamberlin and Ivie, 1939, *Verh. VII Int. Kongr. Ent. Berlin*, 1:64 (*perplexa*).

GENOTYPE: *Diplocentria bidentata* (Emerton).

This genus is close to *Eulaira*, agreeing in general size, color, and structure. The eyes and legs are similar. The chelicerae have five large teeth on the front margin of the fang groove and five denticles on the hind margin. The carapace of the male has the head proportionately narrower and the thorax wider than in the female; otherwise the two sexes are very similar. The male palpus has the distal end of the tibia slightly modified above. The paracymbium is more slender and more hooked than in *Eulaira*; the embolic division is more complex.

Diplocentria corynetes Chamberlin and Ivie, new species

Fig. 27.

Microneta clavata Emerton (in part), 1917, *Canadian Ent.*, 49:265; *17(4). (♀, not ♂ type. ♂ = *Sciastes terrestris* (Emerton) according to Bishop and Crosby, 1938, *J. New York Ent. Soc.*, 46:80).

Eulaira clavata, Chamberlin and Ivie, 1933, *Bull. Univ. Utah*, [Biol.] 2(2):14.

COLOR: Carapace, chelicerae, and endites orange, unmarked, the chelicerae a little darker. Sternum and labium orange, lightly shaded with dusky. Legs and palpi orange. Abdomen light gray. Spinnerets yellow.

STRUCTURE essentially typical. Posterior eye row slightly recurved. Chelicerae with five teeth on front margin of fang groove. Legs a little longer than typical. Epigynum elongate.

Measurements:	♀ Holotype
Length	2.20 mm.
Carapace:	
Length	.92
Width	.73
Tibia-patella:	
1	.93
4	1.06

TYPE LOCALITY: New York: McLean (W 76° 17': N 42° 33'); May 16, 1925; ♀ holotype, ♀ paratype.

OTHER LOCALITY: New York: Wilmington Notch (73.44). (Emerton, 1917). ♀.

Diplocentria perplexa (Chamberlin and Ivie)

Fig. 28.

Maso perplexa Chamberlin and Ivie, 1939, *Verh. VII Int. Kongr. Ent. Berlin*, 1:64; *48-49.

Color, size, and structure typical. Male palpus distinctive.

Measurements:	♂ Holotype
Length	1.83 mm.
Carapace:	
Length	.90
Width	.80
Tibia-patella:	
1	.80
4	.90

TYPE LOCALITY: Utah: Cobble Rest, upper Provo River (W 111° 0': N 40° 35'); July 30, 1936; ♂ holotype; W. Ivie collector.

Diplocentria bidentata (Emerton)

Figs. 21-26.

Tmeticus bidentatus Emerton, 1882, *Trans. Conn. Acad. Sci.*, 6:56; *17:2.

Oedothorax bidentatus, Crosby, 1905, *Proc. Phila. Acad. Sci.*, 310.

Tmeticus rivalis Cambridge, 1905, *Proc. Dorset Nat. Hist. and Antiquarian Field Club*, pp.

47 and 61, figs. 14-18.

Diplocentria rivalis, Hull, 1911, *Trans. N. H. Soc. Newcastle*, 3:581.

Eulaira tigana Chamberlin and Ivie, 1935, *Bull. Univ. Utah*, 4[Biol.] 2(8):15; *6, 85.

Scotoussa bidentata, Bishop and Crosby, 1938, *J. New York Ent. Soc.*, 46:87; *69-71.

COLOR: Carapace, chelicerae, endites, legs, palpi, and spinnerets light orange; carapace sometimes lightly marked with dusky. Sternum and labium dusky yellow. Abdomen light gray.

STRUCTURE: Similar to *Eulaira dela*, but with the typical generic differences. Anterior eye row slightly recurved; a. m. eyes sub-contiguous,

about a radius from the side eyes. Posterior row straight; eyes equidistant, a little more than a radius apart. Palpus with embolic division complex.

Measurements:	♂	♀
Length	1.90 mm.	1.95 mm.
Carapace:		
Length	.90	.82
Width	.73	.62
Tibia-patella:		
1	.80	.78
4	.90	.88

TYPE LOCALITY: New Hampshire: Mt. Washington (71.44). (Emerton, 1882). ♂ s ♀ s.

NEARCTIC LOCALITIES:

Labrador: Battle Harbor. (Emerton, 1919).

Maine: Fort Fairfield (67.46). (Emerton).

Maine: Presque Isle (67.46); Aug. 26, 1925. (Bishop and Crosby, 1938). 3 ♂ 3 ♀.

Maine: Mt. Katahdin (68.45). (Emerton).

Quebec: Bagotville (70.48); July 26, 1934. (Bishop and Crosby, 1938). 10 ♂.

Quebec: Herbertville; July 29, 1934. (Bishop and Crosby, 1938). 8 ♂.

New Hampshire: Mt. Washington (71.44). (Emerton, 1882; type locality. ♂ s ♀ s.

Same: July 5, 1925. (Bishop and Crosby, 1938.) ♂ 4 ♀.

New Hampshire: Sandwich Mts. (71.43). (Emerton).

Vermont: Mt. Mansfield (72.44). (Emerton).

Vermont: top of Mt. Mansfield (72.44); June 14, 1927. (Bishop and Crosby, 1938). ♂ ♀.

New York: Mt. Whiteface (73.44); Aug. 22, 1916. (Bishop and Crosby, 1938). 17 ♂ 16 ♀.

New York: Slide Mt. (74.42); June 24, 1934. (Bishop and Crosby, 1938). ♂ 4 ♀.

Michigan: Marquette (87.46); A. M. Chickering. (Chamberlin and Ivie, 1935). ♀.

Colorado: Hot Sulphur Springs (106.40); August 24, 1935; W. Ivie. ♂ 2 ♀.

Colorado: Between Buena Vista and Salida (106.38); Sept. 4, 1937; R. V. Chamberlin. ♂ ♀.

Utah: Junction Deep and Carter Creeks (109.40); July 21, 1935; R. V. Chamberlin. 4 ♀.

Wyoming: Fishing Bridge, Yellowstone Park (110.44); August 12, 1940; W. Ivie. 4 ♂ 4 ♀.

Utah: Smith and Morehouse Canyon (111.40); October 7, 1932; W. Ivie. (Chamberlin and Ivie, 1935; type locality of *Eulaira tigana*). 4 ♂ 4 ♀.

Alberta: Banff (115.51). (Emerton, 1919).

Alberta: Sulphur Mt., Banff (115.51); August 22, 1927. (Bishop and Crosby, 1938). 2 ♂ 2 ♀.

Alberta: Jasper (118.52). (Emerton, 1919).

Figures and Explanations

PLATE I.

1. *Eulaira dela* Chamberlin and Ivie. Male.
2. Same. Left palpus, ventral view.
3. Same. Left palpus, mesal view.
4. Same. Epigynum.
5. *Eulaira simplex* (Chamberlin). Epigynum.
6. Same. Tibia and patella of right palpus, dorsal view.
7. Same. Left palpus, ventral view.

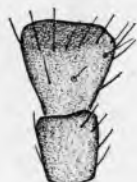
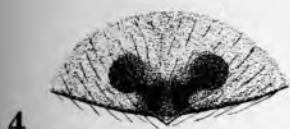
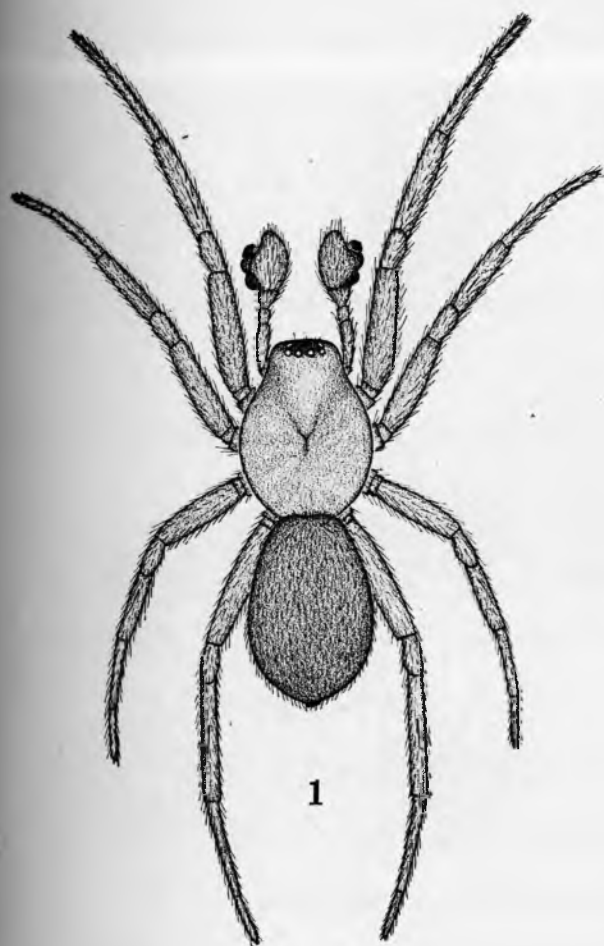


PLATE II.

8. *Eulaira thumbia* Chamberlin and Ivie. Left palpus, ventral view.
9. Same. Epigynum.
10. *Eulaira schediana* Chamberlin and Ivie. Left palpus, ventral view.
11. Same. Left palpus, ectal view.
12. Same. Epigynum.
13. *Eulaira schediana nigrescens* Chamberlin and Ivie. Epigynum.
14. *Eulaira obscura* Chamberlin and Ivie. Epigynum.
15. *Eulaira altura* Chamberlin and Ivie. Epigynum.
16. *Eulaira delana* Chamberlin and Ivie. Epigynum.
17. *Eulaira microtarsus* (Emerton). Epigynum.
18. Same. Left palpus, ventral view.
19. *Eulaira chelata* Chamberlin and Ivie. Left palpus, ventral view.
20. Same. Epigynum.



8



10



11



9



12



13



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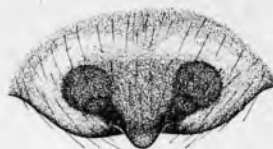
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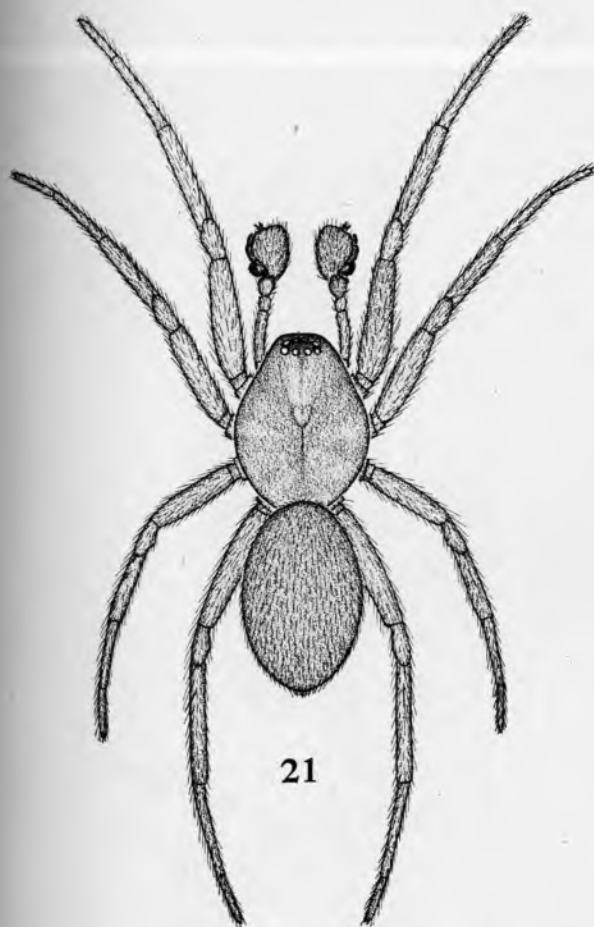
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PLATE III.

21. *Diplocentria bidentata* (Emerton). Male.
22. Same. Epigynum.
23. Same. Left palpus, mesal view.
24. Same. Left palpus, ventral view.
25. Same. Left palpus, ectal view.
26. Same. Tibia and patella of left palpus, dorsal view.
27. *Diplocentria corynetes* Chamberlin and Ivie. Epigynum.
28. *Diplocentralia perplexa* (Chamberlin and Ivie). Left palpus, ectal view.



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